REMARKS

Enclosed is a petition for an extension of time and the appropriate fee.

Applicant acknowledges with appreciation that Claim 7 is allowed and that Claims 2 and 3 are allowable if rewritten in independent form. Claims 2 and 3 are currently amended to be in condition for allowance.

Applicant respectfully requests reconsideration of this application in view of the foregoing amendments to the claims and the following comments. Applicant's amendments do not raise the issue of new matter and do not present new issues requiring further consideration or search.

Claims 1 and 4-6 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Ikeda et al.* ("Ikeda" U.S. Patent No. 5,071,727). Applicant respectfully traverses.

The Office Action maintains that it would have been obvious to replace the calculating method of Ikeda by the method defined by the CIE 1997 Interim Color Appearance Model (Ikeda col. 10 ll. 13-21). The color comparison method of Ikeda uses the Japanese Standards Institute method Z8723 that is based on the Munsell Color System ("Munsell"). Applicant submits that it is not obvious to replace chroma in Munsell with chroma in the CIE 1997 Interim Color Appearance Model since the relation between value and chroma is different between a color difference system like Munsell and a color appearance system like the CIE 1997 Color Appearance Model. One of ordinary skill in the art would not apply this calculating method from a color difference system to a color appearance system.

See, for example, "Evaluation of uniform color spaces developed after adoption of CIELAB and CIELUV" by M. Mahy, L. van Eycken and A. Oosterlinck, Color Research Application, vol. 19 pp. 105-121, 1994.

> Uniformity of small and large color differences cannot be measured by the same colour-difference formula since the relation of lightness with chroma is different in colour-difference systems and colour-appearance systems.

The Ikeda reference is directed to a copier toner for use in electrostatic recording and more particularly attempts to address a problem of charge controlling agents that are added to the toner to improvement performance, but can create an obstacle to the formation of bright chromatic colors (Ikeda col. 2 ll. 32-33). According to Ikeda, a solution to this problem is to provide a distribution of a stable amount of a triboelectric charge through friction between toner particles (Ikeda col. 3 ll. 64-68). In determining the whiteness of the toner material, Ikeda suggests placing an amount of the toner sample in a transparent plastic bag and then placing glossy standard color chips in an identical transparent plastic bag to perform a comparison indicating a difference is calculated between a sample of the toner material and the standard color chips (Ikeda col. 10 ll. 13-25).

The Office Action suggests that the equation on column 10 line 7 of Ikeda is in the same form of the equation (1) of the present invention as shown in independent Claim 1. For convenience, the equation in question from Ikeda is labeled W_1 and the equation presented by the Office Action is labeled W_2 and presented as follows:

$$W_1 = 1 - [1/40](C^2 + [4(10-V)]^2)^{1/2}$$

$$W_2 = - [1/40]C + 1$$

The Office Action illustrates in detail how allowing the Value "V" to approach the numerical value of 10 causes the term $[4(10-V)]^2$ from W_1 to become a very small number, thereby transforming W_1 into W_2. Although mathematically this simplification is possible, such a simplification is neither obvious nor desirable since Ikeda does not teach or suggest that the V component approaches a numerical value of 10 or that the term $[4(10-V)]^2$ from W_1 approaches zero. In contrast, Ikeda teaches W_1 as a two variable computation for whiteness in a color difference system in order to determine the acceptable whiteness of a positively chargeable toner compound (Ikeda col. 10 ll. 1-12). A person of ordinary skill in the art would appreciate a color difference system using both the Chroma "C" and Value "V" terms would require both terms, and not simplify one term out of the equation in order to coerce the form of the equation from a color difference system into use in a color appearance system.

However, even if the Value term is reasonably close to the number 10, the whiteness values calculated by the two equations are still significantly different as shown in the table below.

The Delta % column shows the percentage difference between the whiteness calculated as (W2 - W1)/W2 * 100% that varies from a low of 2.37% to a high of 13.0%.

Value	Chroma	W1	W2	Delta %
9.25	1.00	0.921	0.975	5.54
9.25	2.00	0.910	0.950	4.23
9.25	3.00	0.894	0.925	3.36
9.25	4.00	0.875	0.900	2.78
9.25	5.00	0.854	0.875	2.37
9.00	1.00	0.897	0.975	8.01
9.00	2.00	0.888	0.950	6.51
9.00	3.00	0.875	0.925	5.41

9.00	4.00	0.859	0.900	4.60
9.00	5.00	0.840	0.875	4.01
8.75	1.00	0.873	0.975	10.5
8.75	2.00	0.865	0.950	8.91
8.75	3.00	0.854	0.925	7.65
8.75	4.00	0.840	0.900	6.68
8.75	5.00	0.823	0.875	5.92
8.50	1.00	0.848	0.975	13.0
8.50	2.00	0.842	0.950	11.4
8.50	3.00	0.832	0.925	10.0
8.50	4.00	0.820	0.900	8.92
8.50	5.00	0.805	0.875	8.03

Even if the chroma values are considered the same as suggested, the difference in whiteness measured is substantially different since the Value component may not be exactly 10 allowing W_1 to simplify into a form of W_2.

Additionally, the coefficient value associated with the Chroma term "C" in W_2 is two orders of magnitude smaller than the range of terms claimed in the present invention, providing another indication that the color difference system and the color appearance system calculations are drawn to different applications.

To establish a prima facie case of obviousness, the Examiner must demonstrate that one of ordinary skill in the art would have found both suggestions to construct the claimed structure, and a reasonable expectation of successfully doing so, in the prior art. In re Vaeck, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). Moreover, the examiner bears the initial burden of supplying the factual basis for his position. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). although the Examiner may take official notice of technical facts outside of the record to fill the gaps that might exist in the evidentiary showing to satisfy his burden, such asserted technical facts must be "capable of such instant and unquestionable demonstration as to defy dispute." In re Ahlert, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). However,

[a]ssertions of technical facts in areas of esoteric technology must

always be supported by citation to some reference work recognized

as standard in the pertinent art and the appellant given, in the

Patent Office, the opportunity to challenge the correctness of the

assertion ... [a]llegations concerning "knowledge" of the prior art,

which might be peculiar to a particular art, should also be

supported and the appellant similarly given the opportunity to

make a challenge.

Ahlert, 424 F.2d at 1091, 165 USPQ at 420-1.

The Office Action failed to address the fact that a person of ordinary skill would not

assume that the relationship between Value and Chroma is the same between a <u>color difference</u>

<u>system</u> of the cited Ikeda reference and <u>color appearance system</u> of the present invention.

Applicant respectfully requests the rejection be withdrawn.

Although applicant does not agree that equation (1) in independent Claim 1 is obvious

from Ikeda based on the above arguments, it is readily apparent that the Examples 1 through 3 of

the present invention defined in Claims 4 through 6 have a coefficient a of a negative real

number greater in magnitude than Ikeda's -[1/40] = -0.025, e.g. Claim 4 (-5.3), Claim 5 (-4.4),
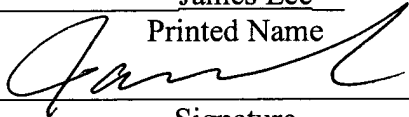
and Claim 6 (-3.3).

It is believed that all claims are in condition for allowance, and an early notification of

the same is requested.

If the Examiner believes that a telephone interview will help further the prosecution of

this case, he is respectfully requested to contact the undersigned attorney at the listed telephone
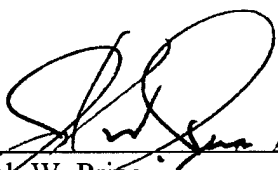
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